In the claims:

1. (currently amended) A photomultiplier power supply comprising:

(a) a primary transformer winding for receiving an input voltage;

(b) a plurality of power supply cells, wherein each cell comprises: ~~comprising:~~

(c) a secondary winding coupled to the primary transformer winding;

(d) a first diode having a cathode connected to a ~~the~~ high side of the secondary winding;

(e) a second diode having an anode connected to the high side of the secondary winding;

(f) a center tap connected to a ~~the~~ low side of the secondary winding;

(g) a first capacitor having a first side connected to the center tap and a second side connected to an ~~the~~ anode of the first diode;

(h) a second capacitor having a first side connected to the center tap and a second side connected to a ~~the~~ cathode of the second diode;

(i) ~~the~~ a positive terminal of a given cell connected to a ~~the~~ negative terminal of a following cell;

(j) ~~the~~ a negative terminal of a ~~the~~ first cell connected to a photo cathode, ~~the~~ a first center tap connected to a first dynode, and a second dynode connected to a positive terminal of the first cell; and

(k) ~~the~~ a connection pattern of connections (d) through (j) ~~series~~ repeated until a positive terminal for a last cell is connected to a resistor connected in

series with an anode terminal ~~is reached~~ wherein any unused terminal in a last cell is left unconnected.

2. (currently amended) The power supply of claim 1 wherein ~~the~~ a voltage ratio is changed between photomultiplier tube elements by moving a dynode connection from a center tap in a cell to a positive terminal in the cell.

3. (currently amended)The power supply of claim 1 wherein ~~the~~ a voltage ratio is changed between photomultiplier tube elements by changing the number of turns in ~~the~~ a secondary coil.

4. (currently amended)The power supply of claim 1 wherein ~~the~~ a voltage ratio is changed between photomultiplier tube elements by moving a dynode connection from a center tap in a cell to a positive terminal in the cell and changing the number of turns in ~~the~~ a secondary coil.

5. (currently amended) A method for providing a photomultiplier power supply comprising:

(a) coupling a primary transformer winding for receiving an input voltage to a secondary winding comprising a plurality of power supply cells;

(b) connecting a first diode having a cathode to a high side of the secondary winding;

(c) connecting a second diode having an anode connected to the high side of the secondary winding;

(d) connecting a center tap ~~connected~~ to a low side of the secondary winding;

(e) connecting a first capacitor having a first side connected to the center tap and a second side connected to an anode of the first diode;

(f) connecting a first side of a second capacitor to the center tap and connecting a second side of the second capacitor to a cathode of the second diode;

(g) connecting a positive terminal of a given cell to a negative terminal of a following cell;

(h) connecting a negative terminal of a first cell to a photo cathode, connecting a first center tap to a first dynode, and connecting a second dynode to a positive terminal of the first cell; and

repeating (b) through (g) ~~the connection series~~ until a positive terminal for a last cell is connected to a resistor connected in series with an anode terminal ~~is reached~~; and

leaving unconnected any unused terminal in a last cell.

6. (currently amended) The method of claim 5 further comprising:

moving a dynode connection from a center tap in a cell to a positive terminal in the cell to change ~~the~~ a voltage ratio between photomultiplier tube elements.

7. (currently amended) The method of claim 5, further comprising:

changing the number of turns in ~~the~~ a secondary coil to change ~~the~~ a voltage ratio between photomultiplier tube elements.

8. (currently amended) The method of claim 5, further comprising:

changing the number of turns in ~~the~~ a secondary coil by moving a dynode connection from a center tap in a cell to a positive terminal in the cell to change ~~the~~ a voltage ratio between tube elements.

9. (currently amended) A system for providing power to a photomultiplier for measuring at least one of counts and pulse heights using a down hole tool having a photomultiplier tube and photomultiplier power supply comprising:

(b) a down hole tool for traversing a well bore formed in the earth, the tool further comprising;

(c) a photomultiplier tube;

(d) a photomultiplier power supply comprising a primary transformer winding for receiving an input voltage;

(e) a plurality of power supply cells, wherein each cell comprises: ~~comprising:~~

(f) a secondary winding coupled to the primary winding;

(g) a first diode having a cathode connected to ~~the~~ a high side of the secondary winding;

(h) a second diode having an anode connected to the high side of the secondary winding;

(i) a center tap connected to ~~the~~ a low side of the secondary winding;

(j) a first capacitor having a first side connected to the center tap and a second side connected to the anode of the first diode;

(k) a second capacitor having a first side connected to the center tap and a second side connected to ~~the~~ a cathode of the second diode;

(l) ~~the~~ a positive terminal of a given cell connected to ~~the~~ a negative terminal of a following cell;

(m) ~~the~~ a negative terminal of ~~the~~ a first cell connected to a photo cathode, ~~the~~ a first center tap connected to a first dynode, and a second dynode connected to a positive terminal of ~~the~~ a first cell; and

(n) ~~the~~ series repeated until a resistor connected in series with an anode terminal is reached wherein any unused terminal in a last cell is left unconnected.

10. (currently amended) The system of claim 9 wherein ~~the~~ a voltage ratio is changed between photomultiplier tube elements by moving a dynode connection from a center tap in a cell to a positive terminal in the cell.

11. (currently amended) The system of claim 9 wherein ~~the~~ a voltage ratio is changed between photomultiplier tube elements by changing the number of turns in ~~the~~ a secondary coil.

12. (currently amended) The system of claim 9 wherein ~~the~~ a voltage ratio is changed between photomultiplier tube elements by moving a dynode connection from a center tap in a cell to a positive terminal in the cell and changing the number of turns in ~~the~~ a secondary coil.

13. (currently amended) A method for providing power to a photomultiplier in a down hole tool having a photomultiplier tube and photomultiplier power supply comprising:

(a) traversing a well bore formed in the earth, with a down hole tool, the tool further comprising a photomultiplier tube;

(b) providing power to the photomultiplier further comprising,

(c) coupling a primary transformer winding for receiving an input voltage to a secondary winding comprising a plurality of power supply cells;

(d) connecting a first diode having a cathode to a high side of the secondary winding;

(e) connecting a second diode having an anode ~~connected~~ to the high side of the secondary winding;

(f) connecting a center tap connected to a low side of the secondary winding;

(g) connecting a first capacitor having a first side connected to the center tap and a second side connected to an anode of the first diode;

(h) connecting a first side of a second capacitor to the center tap and connecting a second side of the second capacitor to a cathode of the second diode;

connecting a positive terminal of a given cell to a negative terminal of a following cell;

(i) connecting a negative terminal of a first cell to a photo cathode, connecting a first center tap to a first dynode, and connecting a second dynode to a positive terminal of the first cell; and

(j) repeating ~~the~~ a connection series until a resistor connected in series with an anode terminal is reached; and

(k) leaving unconnected any unused terminal in a last cell.

14. (currently amended) The method of claim 13 further comprising:

moving a dynode connection from a center tap in a cell to a positive terminal in the cell to change ~~the~~ a voltage ratio between photomultiplier tube elements.

15. (currently amended) The method of claim 13, further comprising:

changing the number of turns in ~~the~~ a secondary coil to change ~~the~~ a voltage ratio between photomultiplier tube elements.

16. (currently amended) The method of claim 13, further comprising:

changing the number of turns in ~~the~~ a secondary coil by moving a dynode connection from a center tap in a cell to a positive terminal in the cell to change ~~the~~ a voltage ratio between photomultiplier tube elements.